

On Her Shoulders: The Impact of a Woman's Mental Health

POSTER SESSION

Conference attendees are encouraged to actively participate in the poster session, interacting with presenters and other participants. Posters will be reviewed by a panel and awards will be presented at the end of the day.

Gender differences in perceived life stress in the course of bipolar disorder –

Presenter: Manuel Fuentes Salgado MD

Abstract: Objective Compare gender differences on the influence of life events over the course of bipolar disorder
Methods: Participants enrolled in the Mayo Bipolar Biobank from 2009 to 2022. We used a valence-focused life event questionnaire to assess positive and negative stress in the last 12 months prior to an episode in patients with bipolar I and II disorder. Association between stress events and gender were evaluated via linear and logistic regression methods.
Results: 2286 participants, 1417 (62%) were female. There was a significant difference in the negative stress. Women tend to be more affected than men by: Lack of family support, loss of important other, social demands, financial problems, medical illness, health access and coverage issues. ($p \leq 0.05$) Men tend to be more affected than women by: Unemployment and legal problems. ($p \leq 0.05$) **Conclusion:** Gender differences in how stress is experienced and perceive could influence the course of bipolar disorder.

Network Science Elucidates Genomic-Metabolomic Signature of Antidepressant Response and Lifetime History of Attempted Suicide in Adults with MDD – Presenter: Caroline Grant, MD

Abstract: Antidepressant response rates are lower for patients with major depressive disorder (MDD) who have had a prior suicide attempt. Identifying biomarkers of antidepressant response and suicide attempt(s) may help augment pharmacotherapy selection in MDD. A network science approach was utilized to establish a genomic-metabolomic signature of antidepressant response and attempted suicide in 348 adults with MDD. Intrinsic SNVs in the circadian genes CLOCK and ARNTL most differentiated patients with and without a lifetime history of suicide attempt. CLOCK and ARNTL-associated phosphatidylcholines correlated with antidepressant response in individuals without a prior suicide attempt but not in those with a prior attempt. Results provide evidence for a disturbance between CLOCK:BMAL1 circadian processes, circulating phosphatidylcholines, and antidepressant response in individuals with MDD who have attempted suicide. Future investigations of circadian regulation of phosphatidylcholines may help move towards biologically-augmented pharmacotherapy selection for patients with MDD and a lifetime history of attempted suicide.

Dermatological side effects of mood stabilizer treatment in bipolar patients: a systematic review – Presenter: Francesca Pampaloni, MD

Abstract: Bipolar disorder (BD) is a medical illness characterized by recurrent episodes of mania or hypomania and major depression. Mood stabilizers including lithium, carbamazepine, lamotrigine and valproic acid are commonly used. Such treatments may cause adverse reactions involving the skin, hair, and mucosa, causing increasing concern for mucocutaneous reactions to oral mood stabilizer medications. Articles published in peer-reviewed journals indexed in the following databases have been reviewed: MEDLINE (PubMed), Embase, Cochrane Library, Web of Science, Scopus, PsycINFO. The main outcome of this study is to define the incidence rates for any dermatological side effect associated with use of mood stabilizers in BD patients. Moreover, any statistically significant association will also be identified focusing on differences between male and female, age, dermatologic diagnosis, specific medication used, specific dosage/dose range, therapeutic drug levels, duration of therapy, morbidity and mortality.

A complex case of young child with intergenerational trauma who developed seronegative autoimmune encephalitis exacerbated by stimulants –

Presenters: **Maria Saliba, MD, Angelina Wilton, BS**

Abstract: Autoimmune encephalitis (AE) syndromes range from limbic encephalitis to neuropsychiatric symptoms. We present a case of seronegative-AE exacerbated by stimulants in a young girl. This is a girl with a history of ADHD, developmental delay and mild autism. She presented at 4 years-old with concerns regarding intergenerational trauma and parent-child relational difficulties. Patient's mother struggled with alcohol use disorder and depression. Child-parent psychotherapy was helpful, but at age 6, patient presented with daily orofacial and arm movements, crawling sensation and personality changes one month after. Her brain MRI, EEG and serology were negative. However, oligoclonal bands were found in the CSF. Dexmethylphenidate-hydrochloride was discontinued, which improved her symptoms. Methylprednisolone infusion was given and lisdexamfetamine was started. The stimulant worsened the symptoms which prompted its discontinuation and her symptoms again improved. Our presentation highlights the disease course complicated by intergenerational trauma and prolonged treatment requiring multimodal approaches and interdisciplinary treatment team.

Why is clozapine so underutilized and what can be done about it? –

Presenter: **Felicia Hansell, MD**

Abstract: Despite the superior efficacy of clozapine to treat psychosis, it is severely underutilized in the U.S. (~3% of antipsychotic Rx) although 20-40% of patients derive minimal benefit from standard treatment. Contributing factors include challenging side effects, FDA-mandated REMS monitoring, inadequate training, financial disincentives and reluctance of providers and patients alike to pursue what is often seen as a "last resort." It is seen as dangerous although mortality on clozapine is lower than any other antipsychotic and its use is cost-effective. We propose to develop a collaborative network in Minnesota of psychiatrists, pharmacists, advocates and persons with lived experience to provide education and clinical support to increase clozapine utilization. Rather than a handful of specialized clozapine clinics, we believe that any psychiatrist dealing with psychosis should be able to use this life-changing treatment safely and effectively to improve the quality of life of their patients.

Sex Differences in Efficacy and Adverse Effects of Mood Stabilizer Treatment: A Systematic Review – Presenter: Mete Ercis M.D.

Abstract: Mood stabilizers are the mainstay treatment of bipolar disorders. Despite differences regarding prevalence, symptom profiles and course of illness between males and females, the impact of sex on treatment outcomes is relatively unknown in mood disorders. Our aim was to identify sex differences in mood stabilizer treatment outcomes. We conducted a systematic review on sex differences in the efficacy and adverse effects of mood stabilizers following the PRISMA 2020 statement. There was a total of 14 articles, four reporting on the efficacy, 10 on adverse effects of mood stabilizers. Nine articles (64.3%) had low-risk of bias. There was only one article on the efficacy of each mood stabilizer. Sex differences in adverse effects were explored only for lithium, where hypothyroidism was associated with female sex in five of them. The number of studies focusing on sex differences in treatment outcomes with mood stabilizers is limited and further research is needed.

Rapid cycling in bipolar disorder: a mixed-method systematic meta-review of the current available evidence on three relevant topics – Presenter: Alessandro Miola, MD

Abstract: Rapid cycling bipolar disorder (RC-BD) is associated with worse outcome and poor response to available treatment. The current meta-review surveyed the consistency in the definition of RC-BD, the estimated prevalence, and clinical factors associated with RC-BD. Out of 146 references, 22 systematic reviews fulfilled the selection criteria. The RC-BD definition was fairly consistent and congruent with Dunner and Fieve's initial definition. We included 30 independent reports involving 13,698 BD patients, of whom 3,775 had a RC-BD. Lifetime prevalence of RC-BD at the meta-analytic random-effects model was 35.5% (95%CI 27.6-44.3); current prevalence was 22.3% (95%CI 14.4-32.8). A previous history of childhood maltreatment, an increased risk of mixed features, lifetime suicidal behavior, and a poor response to mood

stabilizers showed convincing evidence as risk and prognostic factors for RC-BD. Conversely, the relationship between RC-BD and longer duration of illness, depressive predominant polarity, BD type II, and female gender lacked strong evidence.

The role of extraversion in mental health outcomes during the COVID-19 pandemic in adolescent girls – Presenter: Heena Gardner

Abstract: *Background: Low extraversion has been associated with depression. During the COVID-19 pandemic, many speculated that lockdowns would be harmful for extroverts. We investigated the role of extraversion in mental health in adolescent girls during the pandemic. Methods: Adolescents with and without a history of self-harm completed 5 surveys between 2020 and 2021 (baseline survey N = 93; final survey N = 26). We examined associations between extraversion and mental health outcomes (depression, loneliness, perceived stress, and flourishing), and tested differences in change over time in time in girls with low, medium, and high extraversion. Results: Higher extraversion correlated with higher levels of flourishing ($p=1.402e-06$); the remaining mental health outcomes showed highly significant negative associations with extraversion. No significant differences in extraversion-associated patterns over time were detected. Discussion: Despite lockdowns, adolescents with high extraversion fared better during the pandemic. Low attrition rate limited our ability to detect significant changes over time.*

An exploratory study of clinical and physiological correlates of problematic social media use in adolescents – Presenter: Ammar Almorsy, MD

Abstract: *Prior validation studies of the Bergen Social Media Addiction Scale demonstrate its utility for identifying problematic social media use in adolescents. There are knowledge gaps regarding the potential clinical and physiological underpinnings of problematic social media use in adolescents. This cross-sectional study examined a sample of depressed (n = 30) and healthy (n = 30) adolescents who underwent clinical assessments of depressive symptom severity, bullying, cyberbullying, self-esteem, salivary measures of stress to identify correlates with adolescent and parental reports of the BSMAS. LASSO-penalized multiple linear regression models were implemented. With respect to the adolescent BSMAS scores in all subjects, the risk of problematic social media increased as depressive symptom severity increased. Depressed female adolescents appeared to have a greater risk. For the depressed sample, the risk of problematic social media use increased as salivary cortisol increased. No significant predictors of problematic social media usage emerged in the healthy control sample.*

COVID-19 pandemic effects on clinical outcomes of TMS treatment: a naturalistic study – Presenters: Meagan Campbell; A. Irem Sonmez, MD, MSc

Abstract: *The COVID-19 crisis induced deep modifications in the population health profile. Two goals of this study were to measure the pandemic's effect on clinical outcomes of TMS treatment and to explore if there are lasting effects of COVID disease on self-reported depression symptoms. Data from the University of Minnesota Neuromodulation Clinic was retrospectively analyzed. Clinical outcomes of patients who received TMS after lockdown measures were compared to those who completed the series prior to the lockdowns. Clinical outcomes were also compared between patients based on COVID disease status in relation to TMS treatment date. Out of 285 patients who received TMS, 60 patients' treatment was affected by the COVID lockdown. Pre-pandemic response rate was 48.8%. This decreased to 30% post-pandemic (Chi-square $p= 0.016$). Certain symptoms (including suicidal ideation) were reported to be less severe after the lockdown; however, TMS was also less effective in improving these symptoms. Next steps will be to contact patients to confirm COVID disease status to further ascertain any potential relationship*